

A SHORT REVIEW OF THE TRIBES ORSODACNINI
AND CRIOCERINI OF THE COLEOPTEROUS
FAMILY CHRYSOMELIDÆ WITH SPE-
CIAL REFERENCE TO SPECIES OF
WESTERN UNITED STATES

BY HAROLD R. BRISLEY

TRIBE ORSODACNINI

This tribe embraces four genera, all of which are well represented in western United States. In 1873 G. R. Crotch¹ the genus *Syneta*. He also described the one species of the genus *Orsodacna* and gave a short table of the species of *Zeugophora*, but omitted the species *Tricolema anomala* Cr., which had been described eighteen years before. Since 1892 no systematic work has been published treating of the tribe.

The tables constructed by the above mentioned authors, for separation of genera and species, were evidently based on relatively small series, and after a detailed study of characters available for use in separation, I have constructed the tables given below which I am satisfied can be used with much greater precision. Crotch based the separation of genera on the characters of prothoracic dentation and open or closed anterior coxal cavities, good characters at that time, but the former, at least, was reduced to little value upon the introduction of the genus *Tricolema*. LeConte and Horn use as their main characters the separation and prominence of the anterior coxæ and the shape of the sides of the prothorax. These characters are merely relative and can be used with precision only when comparative specimens are at hand. With the presence of more defined reviewed the genera *Orsodacna*, *Syneta* and *Zeugophora*, including in them twelve species known at that time. A year later² he described a new genus *Tricolema* to make a place for the new species *T. anomala* Cr. In 1883 LeConte and Horn³ classified the four genera mentioned above under the tribal name of *Sagrini*. In 1892 G. R. Horn⁴ discussed at some length nite characters, these can better be used as secondary divisional points.

¹ Proc. Acad. Nat. Sci. Phila., Vol. 25, 1873, pp. 19-83.

² Trans. Am. Ent. Soc., Vol. 5, 1874, pp. 73-80.

³ "Classification of the Coleoptera of North America." Smith. Misc. Coll., Vol. 26, 1883.

⁴ Trans. Am. Ent. Soc., Vol. 19, January, 1892, p. 1.

It might be well to explain the limitations of the serial arrangement of the punctuation in the genus *Syneta*. This is usually definite, but in large series some females may be found where this character cannot be readily applied. In a case of this kind, if the characters of the open front coxal cavities and the lateral prothoracic dentation are used, no error can result.

KEY TO THE GENERA OF THE TRIBE ORSODACNINI

- A. Elytral punctuation at least in part serially arranged; body sparingly pubescent; front coxal cavities open behind; sides of prothorax dentate.....3. *Syneta* Lec.
- AA. Elytral punctuation entirely confused.
 - B. Upper surface densely clothed with long decumbent pubescence.....2. *Tricolema* Cr.
 - BB. Upper surface either destitute of pubescence or with a single erect seta in each puncture.
 - C. Prothorax somewhat bell-shaped, the sides evenly rounded without lateral teeth or tubercles.....1. *Orsodacna* Latr.
 - CC. Prothorax with the sides toothed or tuberculate.
 - 4. *Zeugophora* Kunze

Genus ORSODACNA Latr.

This genus contains a single, widely distributed species, whose color is so variable that it has been described under ten different names. These were later reduced to six varieties of the species *Orsodacna atra* (Ahr.). A recent key to the color varieties of this species is given by W. S. Blatchley in his "Illustrated Descriptive Catalogue of the Coleoptera Known to Occur in Indiana." The species is distributed throughout the eastern United States, and in the territory west of the Rocky Mountains has been taken in Montana, Colorado, Arizona, Utah, California and Oregon. Adults are usually found on willows in the spring of the year.

Genus TRICOLEMA Cr.

In 1874 G. R. Crotch described the genus *Tricolema*¹ from the new species *anomala*, which he also describes in the same paper. His generic description follows:

"Elongate, nearly parallel, pubescent, eyes small, head not constricted behind, anterior coxæ contiguous, first joint of the anterior four tarsi longer than the others, claws simple, epipleuræ of elytra excessively feeble."

¹ Trans. Am. Ent. Soc., Vol. 5, 1874, p. 79.

LeConte and Horn² recognized this genus and included in it the single species *anomala*. Clavareau³ and Leng⁴ both suppressed it to a subgenus under *Syneta*, evidently doing this on the assumption that the Crotch generic description did not state sufficient characters to warrant its generic rank.

After a close study of the group, I am convinced that *T. anomala* shows characters which are more than sufficient to justify its being placed in a separate genus. I am, therefore, revising the genus *Tricolema*, as described by Crotch, and placing in it the single species *T. anomala*.

It will be noted in the original description Crotch states that the claws are simple. The specimens at hand, which belong to the collection of Dr. E. C. Van Dyke, have been compared with the Crotch types, and the claws, though simple in the females, are distinctly cleft in the males. His two generic characters, the pubescence and the excessively feeble elytral epipleuræ, are, therefore, the only two characters which would serve to distinguish the genus from *Syneta*. As will be noted in the following revision, there are other good and valuable generic characters which fully justify its generic standing.

Revised description of genus *TRICOLEMA* Cr.

Elongate, subcylindrical, entire body above and below including the legs covered with long, dense, whitish pubescence.

Head laterally narrowed behind the eyes, not so dorsally, densely and deeply punctate, median longitudinal ridge more or less indicated by lack of punctuation; antennæ filiform, one-half to three-fourths the length of body, second segment short, about one-half the length of third.

Prothorax cylindrical, without lateral margins, coarsely punctate, distinctly widened at middle and subangulate laterally, the angulation more or less concealed by the pubescence, anterior and posterior angles distinctly prominent.

Elytra convex, the sides perpendicular or slightly incurved below the sides of the abdominal segments, epipleuræ excessively feeble, punctuation coarse, dense and confused, often largely concealed by the pubescence; a single prominent costa extends back from the umbone and is lost just before the apex,

² "Classification of the Coleoptera of North America." Smith. Misc. Coll., Vol. 24, 1883, p. 338.

³ W. Junk, "Coleopterorum Catalogus," Pars. 51, p. 36.

⁴ "Catalogue of the Coleoptera of Am., North of Mex."

while traces of two other costæ are sometimes indicated on the disk near the base.

Legs moderately long and slender; anterior coxæ contiguous, open behind, the prosternum narrowed to a mere blade between them, and posteriorly unattached; middle and posterior coxæ narrowly separated; apices of all the tibiæ fimbriate, entirely lacking terminal spines; tarsal claws of male cleft, of female simple; fifth ventral segment of male flattened and greatly elongated at middle, crowding segments two, three and four together into a space about one-half its length (Fig. 2); fifth ventral of female normal (Fig. 3).

The only genera with which *Tricolema* might be confused are *Syneta* and *Orsodacna*. It is distinct from *Syneta* by a number of characters, the most outstanding of which are:

1. The feeble epipleuræ.
2. The pubescence and confused punctuation.
3. The simple tarsal claws of the female.
4. The elongated fifth ventral segment of the male.
5. The subangulate sides of the prothorax.

Tricolema may be separated from *Orsodacna* by:

1. The open anterior coxal cavities.
2. The feeble character of the epipleuræ.
3. The pubescence of the upper surface.
4. The lack of terminal tibial spines.
5. The laterally subangulate prothorax and prominent prothoracic angles.

Until more species of this genus are found, its most logical place is between *Orsodacna* and *Syneta*, though on account of its diverse characters, its placement there is questionable.

The genus is composed of a single species *Tricolema anomala* Cr., which has been collected only in California. The insects I studied were from the following localities:

- Atwood's Mill, Tulare County, Calif., April 29, 1913 (1 specimen);
Carrville, Trinity County, Calif., April 29, 1913, (1 specimen);
Muir Woods, Marin County, Calif., May 9, 1920 (7 specimens);
Lagunitas, Marin County, Calif., April 29, 1908 (3 specimens);
Placer County, Calif. (no date), (4 specimens);
McCloud, Calif., June 26, 1914 (1 specimen);
South Fork, Kings River Canyon, Fresno County, Calif., altitude 5000 feet, July 4, 1910 (1 specimen);
Meadow Valley, Plumas County, Calif., altitude 4000 feet, June 7, 1924 (2 specimens).

Genus SYNETA Lac.

In 1892 George R. Horn⁵ published the results of his study of the genus *Syneta* Lac. In the text, as well as in the illustrations, he made the error of confusing the species *S. hamata* and *S. simplex*. The following year⁶ he published a note correcting this mistake. On account of this error his published table contains only four instead of five species. He based his division of species primarily on the form of the antennæ. A quotation from his article follows:

"Several important facts have been learned. The first is, that the characters heretofore used in separation of the species based on color, sculpture, and the mode of dentation of the sides of the thorax, have an extremely small value. The second is, that the form of the antennæ, together with the sexual peculiarities of the male, afford the only means of specific definition."

There is no doubt that these characters were an improvement over those formerly used, but even the Horn characters will be found very confusing in practice. In his search for characters, he evidently overlooked the very useful one of the presence of one or two terminal spurs on the posterior tibiæ. In his description of species he mentions the terminal spurs only in connection with *S. simplex* (corrected to read *S. hamata*), *S. ferruginea* and *S. albida*, but made no mention as to whether they were single or double. After a study of large series, this character proves to be a very valuable one, and can be used with absolute precision where the specimens are reasonably clean and well preserved.

The species *S. albida* Lec. and *S. simplex* Lec. have been much confused in collections, due mainly to their imperfect and brief descriptions. During recent years Dr. E. C. Van Dyke has successfully straightened out these two species in the collection of the California Academy of Sciences. As he has never published his observations on these species, I am using characters which he found valuable for separation.

The females may readily be distinguished by the deep semi-circular, fimbriate depression of the last ventral segment. In the males this segment is simple, and either truncate or slightly elongated posteriorly. The genus *Syneta* embraces five species, four of which are common to western United States.

⁵ Trans. Am. Ent. Soc., Vol. 19, January 1892, pp. 1-5.

⁶ Trans. Am. Ent. Soc., Vol. 20, April, 1893, p. 133.

KEY TO THE WESTERN SPECIES OF THE GENUS *SYNETA* LAC.

- A. Posterior tibiæ either ramified at apex (male of *hamata*) or with two piceous terminal spurs; antennæ with segments four to ten very nearly equal in length.
 - B. Posterior tibiæ of male simple; outer segments of antennæ usually piceous or black.....1. *carinata* Mann.
 - BB. Posterior tibiæ of male ramified at tip (Fig. 1); outer segments of antennæ usually ferrugineous.....
 - 2. *hamata* Horn
- AA. Posterior tibiæ with only one piceous terminal spur; antennæ with segments eight to eleven nearly equal in length and obviously shorter than those preceding.
 - C. Space between antennæ subequal to the space from eye to antenna; elytra with only a few short, stiff hairs.
 - 3. *albida* Lec.
 - CC. Space between antennæ decidedly greater than space from eye to antenna; elytra with numerous long, stiff hairs.....4. *simplex* Lec.

SYNETA CARINATA Mann.

The species may be readily recognized by the use of the above table. Specimens have been taken from Alaska, Idaho, Utah, Oregon, Washington, and northern California. The native fir (*Abies*) is the preferred food plant of the species.

SYNETA HAMATA Horn

This species is easily distinguished, if males are at hand, by the unusual shape of the posterior tibiæ, which is prolonged on the inner edge beyond the insertion of the tarsi, and has a long, curved process on the posterior edge near the tip (Fig. 1). The apex of the tibiæ has two terminal spurs in the female. These are entirely lacking in the male. Specimens have been taken in Alaska, Washington, Oregon, and northern California. Its principal food plant is the Oregon vine maple (*Acer circinatum* Pursh.).

SYNETA ALBIDA Lec.

This species is closely related to *S. simplex*, and heretofore adequate divisional points have not been noted in the literature. In addition to the characters given in the key, *S. albida* differs from *S. simplex* in having the frontal space between the antennæ more conspicuously raised above the level of the front. The prothorax is more rugose and less severely angulate at the

sides. The punctuation of the elytra is more regularly arranged. *S. albida* is distinct from *S. carinata* and *S. hamata* by having only a single spur at the apex of the hind tibiæ, and by the comparative lengths of the last four antennial segments with those preceding.

The species is entirely western in its distribution, being taken only in Washington, Oregon, and northern California. It is the economic species of the genus for the adults feed on the leaves of plum, cherry, pear, peach, quince, currants, etc. Willow is probably the native food plant. The larvæ feed underground, very likely gaining their sustenance from the rootlets of the above mentioned plants.

SYNETA SIMPLEX Lec.

The confusion of this species and *S. albida* in collections is due to imperfect and brief original descriptions and to lack of intensive work on the genus. By application of the characters given in the preceding key, the two species can readily be separated. In addition, it will be observed that the frontal space between the antennæ is not as conspicuously raised above the level of the front, the prothorax is less rugose and more strongly angulate, and the punctuation of the elytra is less regularly arranged in *S. simplex* than in *S. albida*. *S. simplex* differs from *S. carinata* and *S. hamata* by having only a single terminal spur on the hind tibiæ.

The species is limited to the Pacific Northwest, having only been taken in Washington, Oregon, and California as far south as the San Francisco Bay region. The adults feed on the foliage of oak.

Syneta simplex minuta Brisley, n. var.

This variety differs from the typical *simplex* mainly in size, being conspicuously smaller. Specimens of a large series at the California Academy of Sciences measure 4 to 6 mm. in length for the variety, while typical *simplex* ranges from 6 to 8 mm. in length. In addition to size the variety has the frontal distance between the antennæ not so conspicuously wider than the distance from antenna to eye. The variety has been collected only in the vicinity of San Francisco Bay and as far south as Bryson, California. It feeds on the native species of oak.

(To be Continued)